

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

1 IN THE CLAIMS:

2

3 Claim Listing:

4

5 1. (Previously Presented) A method of using Si-Ge-C in selective etch
6 applications, comprising:

7 growing one or more layers on a single crystal silicon substrate, at least one of
8 which is a Si-Ge-C layer, wherein the carbon of the Si-Ge-C layer is an amount from 1
9 to 10 atomic percent and sufficient to exhibit etch selectivity with respect to the single
10 crystal silicon substrate and/or one or more of the layers adjacent the Si-Ge-C layer;
11 and

12 etching with a liquid etchant, the Si-Ge-C layer and the single crystal silicon
13 substrate and/or one or more of the layers adjacent the Si-Ge-C layer.

14

15 Claims 2-20 (Canceled).

16

17 Claims 21-24 (Never Entered).

18

19 Claim 25 (Canceled).

20

21 Claim 26-44 (Never Entered).

22

23 Claim 45 (Canceled).

24

25 Claim 46 (Never Entered)

26

27 Claim 47-48 (Canceled).

28

29 49. (Previously Presented) The method of claim 1, wherein the Si-Ge-C
30 layer etches slower than the one or more adjacent layers.

1 50. (Previously Presented) The method of claim 1, wherein the Si-Ge-C
2 layer etches slower than the single crystal silicon substrate.

3
4 51. (Previously Presented) The method of claim 1, wherein the Si-Ge-C
5 layer etches faster than the one or more adjacent layers.

6
7 52. (Previously Presented) The method of claim 1, wherein the Si-Ge-C
8 layer etches faster than the single crystal silicon substrate.

9
10 53. (Previously Presented) The method of claim 1, wherein the etching
11 includes applying an etchant selected from the group of KOH and HNA.

12
13 54. (Previously Presented) A method of using Si-Ge-C in selective etch
14 applications in conjunction with a single crystal substrate, comprising:

15 growing one or more epitaxial layers sequentially, starting at the single crystal
16 substrate surface, wherein at least one of the epitaxial layers comprises Si-Ge-C,
17 wherein the carbon of the Si-Ge-C layer is from 1 to 5 atomic percent; and

18 etching with a liquid etchant, the Si-Ge-C layer and the single crystal substrate
19 and/or one or more of the epitaxial layers adjacent the Si-Ge-C layer.

20
21 55. (Previously Presented) The method of claim 54, wherein the Si-Ge-C
22 layer etches slower than the one or more adjacent epitaxial layers.

23
24 56. (Previously Presented) The method of claim 54, wherein the Si-Ge-C
25 layer etches slower than the single crystal substrate.

26
27 57. (Previously Presented) The method of claim 54, wherein the Si-Ge-C
28 layer etches faster than the one or more adjacent epitaxial layers.

29
30 58. (Previously Presented) The method of claim 54, wherein the Si-Ge-C
layer etches faster than the single crystal substrate.

1
2 59. (Previously Presented) The method of claim 54, 55, 56, 57, or 58,
3 wherein the single crystal substrate is a material selected from the group of silicon,
4 silicon-germanium, and germanium.

5
6 60. (Previously Presented) The method of claim 54, wherein the etching
7 includes applying an etchant selected from the group of KOH and HNA.

8
9 61. (Previously Presented) A method of using Si-Ge-C in selective etch
10 applications in conjunction with a substrate, comprising:

11 growing one or more layers sequentially, starting at the substrate, wherein at
12 least one of the layers comprises Si-Ge-C, wherein the carbon of the Si-Ge-C layer is
13 from 1 to 10 atomic percent; and

14 etching with a liquid etchant, the Si-Ge-C layer and one or more layers adjacent
15 to the Si-Ge-C layer and/or the substrate.

16
17 62. (Previously Presented) The method of claim 61, wherein the Si-Ge-C
18 layer etches slower than the one or more adjacent layers.

19
20 63. (Previously Presented) The method of claim 61, wherein the Si-Ge-C
21 layer etches slower than the substrate.

22
23 64. (Previously Presented) The method of claim 61, wherein the Si-Ge-C
24 layer etches faster than the one or more adjacent layers.

25
26 65. (Previously Presented) The method of claim 61, wherein the Si-Ge-C
27 layer etches faster than the substrate.

28
29 66. (Previously Presented) The method of claim 61, 62, 63, 64, or 65,
30 wherein the substrate is a material selected from the group of silicon, silicon-
germanium, and germanium.

1
2 67. (Previously Presented) The method of claim 61, wherein the etching
3 includes applying an etchant selected from the group of KOH and HNA.
4

5 68. (Presently Presented) A method of using Si-Ge-C in selective etch
6 applications, comprising:

7 growing one or more layers on a single crystal silicon substrate, at least one of
8 which is a Si-Ge-C layer, wherein the carbon of the Si-Ge-C layer is in an amount from
9 1 to 10 atomic percent and sufficient to exhibit etch selectivity with respect to the single
10 crystal silicon substrate and/or one or more of the layers adjacent the Si-Ge-C layer;
11 and (Presently Presented)

12 etching with a liquid etchant, the Si-Ge-C layer and the single crystal silicon
13 substrate and/or one or more of the layers adjacent the Si-Ge-C layer wherein the Si-
14 Ge-C layer etches slower than the one or more adjacent layers.

15
16 69. (Presently Presented) A method of using Si-Ge-C in selective etch
17 applications, comprising:

18 growing one or more layers on a single crystal silicon substrate, at least one of
19 which is a Si-Ge-C layer, wherein the carbon of the Si-Ge-C layer is in an amount from
20 1 to 10 atomic percent and sufficient to exhibit etch selectivity with respect to the single
21 crystal silicon substrate and/or one or more of the layers adjacent the Si-Ge-C layer;
22 and

23 etching with a liquid etchant, the Si-Ge-C layer and the single crystal silicon
24 substrate and/or one or more of the layers adjacent the Si-Ge-C layer wherein the Si-
25 Ge-C layer etches faster than the one or more adjacent layers.

26
27 70. (Presently Presented) A method of using Si-Ge-C in selective etch
28 applications in conjunction with a single crystal substrate, comprising:

29 growing one or more epitaxial layers sequentially, starting at the single crystal
30 substrate surface, wherein at least one of the epitaxial layers comprises Si-Ge-C,
wherein the carbon of the Si-Ge-C layer is up to 5 atomic percent; and

1 etching with a liquid etchant, the Si-Ge-C layer and the single crystal substrate
2 and/or one or more of the epitaxial layers adjacent the Si-Ge-C layer wherein the Si-Ge-
3 C layer etches slower than the one or more adjacent epitaxial layers.

4

5 71. (Presently Presented) A method of using Si-Ge-C in selective etch
6 applications in conjunction with a single crystal substrate, comprising:

7 growing one or more epitaxial layers sequentially, starting at the single crystal
8 substrate surface, wherein at least one of the epitaxial layers comprises Si-Ge-C,
9 wherein the carbon of the Si-Ge-C layer is up to 5 atomic percent; and

10 etching with a liquid etchant, the Si-Ge-C layer and the single crystal substrate
11 and/or one or more of the epitaxial layers adjacent the Si-Ge-C layer wherein the Si-Ge-
12 C layer etches faster than the one or more adjacent epitaxial layers.

13

14 72. (Presently Presented) A method of using Si-Ge-C in selective etch
15 applications in conjunction with a substrate, comprising:

16 growing one or more layers sequentially, starting at the substrate, wherein at
17 least one of the layers comprises Si-Ge-C, wherein the carbon of the Si-Ge-C layer is
18 up to 10 atomic percent; and

19 etching with a liquid etchant, the Si-Ge-C layer and one or more layers adjacent
20 to the Si-Ge-C layer and/or the substrate wherein the Si-Ge-C layer etches slower than
21 the one or more adjacent layers.

22

23 73. (Presently Presented) A method of using Si-Ge-C in selective etch
24 applications in conjunction with a substrate, comprising:

25 growing one or more layers sequentially, starting at the substrate, wherein at
26 least one of the layers comprises Si-Ge-C, wherein the carbon of the Si-Ge-C layer is
27 up to 10 atomic percent; and

28 etching with a liquid etchant, the Si-Ge-C layer and one or more layers adjacent
29 to the Si-Ge-C layer and/or the substrate wherein the Si-Ge-C layer etches faster than
30 the one or more adjacent layers.